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6 September 1945

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TO: '

Research and Development Branch

FROM:

Special Assistants Division, R&D

SUPJECT: Final Summary Reports

 Herewith attached are the following final summary reports submitted from Special Assistants Division, Research and Development Branch:

a) "K" Tablets
b) T.D.

Special Assistants Div. Research and Development Branch

SPECIAL ASSISTANTS DIVISION, R&D

FINAL SUMMARY REPORT OF K TABLET

5 September 1945

INTRODUCTION

Authorization: There is no letter of authorization in the Special Assistants Division files but it is understood from Former Special Assistants Division that such authorization was given orally by Former Research and Development Branch. Special Assistants Division was to cooperate with the Medical Branch in giving advice and doing such experimental work as was possible within the Special Assistants Division.

Experimental work was done at and in the laboratories of Special Assistants Division.

<u>Purpose:</u> A small quickly soluble pellet was desired which would cause rapid unconsciousness ("Mnock-out") of a victime but there should be no possibility of death being caused.

MATERIALS AND EXPERIMENTAL METHODS

The choice of suitable "knock-out" material was rather limited because almost all drugs, if given in sufficient dosage, are fatal. The difference between the "knock-out" dose and the lethal dose depends a great deal upon the individual subject so that a knock out dose for one person might be eithal dose for another. Therefore, materials had to be picked which had a relatively large differences between "knock-out" dosages and lethal dosages. Chloral hydrate was one suitable material from this point of view.

However, from the point of view of making suitable beliets, chloral hydrate not satisfactory because at ordinary temperatures it is a liquid. Therefore, a suitable water soluble binder had to be sought. The binder chosen was Carbowax 1000, produced by Carbide and Carbon Chemical Company, New York, New York,

Here again another difficulty arcse--the pellet needed to produce the two requirements above became a wafer.

Nevertheless, a suitable wafer contained the following proportions:

Chloral hydrate Carbowax 4000 2.5 grams 7.5 grams

The second most suitable material from the dosage point of view but the first choice as far as binder and size were concerned was a mixture of morphine

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and hyoscine with a glucose binder. These materials were to be in the proportion of:

Morphine tartrate 0.75 grains
Hyoscine hydrobromide 0.20 grains
and sufficient glucose syrup to bind the materials.

Experimental Methods: All physiological data was obtained from standard pharmacological books with the comments of the Medical Branch.

In the case of the chloral hydrate wafer, the Carbowax 1000 is first multed and the chloral hydrate dissolved therein. After hardening, the mixture may be formed into a wafer in a suitable pellet press.

In the case of the morphine and hyocine, a dry mixture is prenared, noithened with the least possible amount of glucose syrup and formed into a pill by means of a suitable pellet press.

RESULTS

The chloral hydrate wafer will dissolve in two to three minutes in water or a water-alcohol mixture. Because of its bitter taste, it is suggested that a flavored beverage be used such as tea, coffee, whiskey or other alcoholic drinks. The amount of chloral hydrate used is well below the ten gram lethal amount even for the most sensitive victim. The effect would take place in ten to fifteen minutes, reach its effect in one hour, and wear off in five to ten hours. During this time a man could be roused but not easily.

The morphine-hyoscine mixture will also be dispersed in the same Itquids in about the same time and should be used in the same manner. The effect will start in about thirty minutes and last several hours. The pellet does not produce loss of sensation but reduces sensation and greatly diminishes the power of attention and the power of memory.

The difference between the "knock-out" dose and lethal dose in this latter case is not as great as that of chloral hydrate. In the case of chloral hydrate the factor of safety is about four to one, whereas in the morphine-hyoscine mixture this factor is about two to one.

CONCLUSIONS

Although no "K" tablets reached the field, the correct proportions and procedures have been investigated, so that at some future date, suitable pellets could be produced.

RECOMMENDATIONS

Some law enforcement agencies might have a use for "K" tablets.

Special Assistants Division Research and Development Branch

SPECIAL ASSISTANTS DIVISION, R&D

FINAL SUM ARY REPORT OF T. D.

6 September 1945

INTRODUCTION

Authorization: This project was initiated by a memorandum from

Research and Development Branch to

Research and Development Default Development Default United T. D. It was understood that Special Assistants Division would offer any advice or laboratory facilities desired.

<u>Furpose</u>: The material to be used was to produce uninibited truthfulness in an interrogated person.

MATERIALS AND EXPERIMENTAL METHODS

Materials: The active material selected for the physiological and psycological test was marihuma acetate in a purified form. This substance was made into a 50% by weight alcohol solution.

Experimental Methods: When the solution was prepared varying amounts were incorporated into tabacco for making cigaretts and also were dissolved in drinking water. The amounts involved varied from 1/100 cc to 1/100 cc of the alcohol solution. The 1.0 was administered aithout the victim being aware of the procedure by getting him to smoke a cigarette or drink a glass of water.

RESULTS

Reactions of the victims to the interrogation procedure are given in the attached copy of a letter to The Director, Room 12h, Administration Building from dated 31 August 1945, on the subject of T.D.

CONCLUSIONS

Indications are that uninhibited truthfulness can not be obtained by this method. $\label{eq:continuous} % \begin{center} \b$

RECOMMENDATIONS

None

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